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CHAPTER 6

DURHAM N.C. CITY AND COUNTY

FLOOD DAMAGE PROTECTION ORDINANCE

ARTICLE 1 **STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND OBJECTIVES**

SECTION 6-300. **STATUTORY AUTHORIZATION**

This ordinance is adopted under the authority of Article 21 Part 6, of Chapter 143; Article 8 of Chapter 160A; Article 19 Part 5 of Chapter 160A; Article 18, of Chapter 153A; and Article 6 of Chapter 153A of the North Carolina General Statutes, and is designed to promote the public health, safety, and general welfare of the citizens of the City and County of Durham.

SECTION 6-301. **FINDINGS OF FACT**

- (1) The flood hazard areas [floodway and floodway fringe] of Durham City and County are subject to periodic inundation which results in loss of life, or property, and hazards to health and safety, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.
- (2) These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazard causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

SECTION 6-302. **STATEMENT OF PURPOSE**

This ordinance does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding. Larger floods can and will occur and new Flood Hazard Boundary Maps may be adopted over time. This ordinance is imposed to facilitate implementation of the Federal Flood Insurance Program and to minimize the possibility that new construction will sustain damage from flooding. It is the purpose of this ordinance to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (1) restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- (2) require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (3) control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters;
- (4) control filling, grading, dredging, or other development which may increase erosion or flood damage; and,
- (5) prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

SECTION OBJECTIVES
6-303.

The objectives of this ordinance are:

- (1) to protect human life and health;
- (2) to minimize expenditure of public money for costly flood control projects;
- (3) to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) to minimize prolonged business interruptions;
- (5) to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in areas of special flood hazard;
- (6) to help maintain a stable tax base by providing for the sound use and development of areas of flood hazard in such a manner as to minimize flood blight areas; and,
- (7) to insure that potential home buyers are notified that property is in an area of flood hazard.

ARTICLE DEFINITIONS
2.

Unless specifically defined below, words or phrases used in this ordinance shall be interpreted so as to give them the meaning they have in common usage and to give this ordinance its most reasonable application.

"Accessory Structure" means structures which are located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. With the exception of farm buildings, accessory structures shall not exceed 1,000 square feet or the square footage of the primary structure, whichever is less. Garages, carports and storage sheds are common urban accessory structures. Pole barns, hay sheds and the like qualify as accessory structures on farms, and may or may not be located on the same parcel as the farm dwelling or shop building. Accessory structures may not be accessory dwellings.

"Addition (to an existing building)" means an extension or increase in the floor area or height of a building or structure. Additions to existing buildings shall comply with the requirements for new construction.

"Appeal" means a request for a review of the local administrator's interpretation of any provision of this ordinance.

"Area of shallow flooding" means a designated AO or VO Zone on a community's Flood Insurance Rate Map (FIRM) with base flood depths from one to three feet, a clearly defined channel does not exist, the path of flooding is unpredictable and indeterminate, and velocity flow may be evident.

"Area of special flood hazard" or "Areas of flood hazard" is the land within a community subject to a one percent or greater chance of being flooded in any given year. The boundaries of the areas of special flood hazard are identified as Zone A on the Flood Hazard Boundary Map.

"Base flood" means the flood having a one percent chance of being equaled or exceeded in any given year. *Commentary: 100 year flood.*

"Basement" means that lowest level or story which has its floor subgrade on at least three sides.

"Breakaway wall" means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system. A breakaway wall shall have a design safe loading resistance of not less than 10 and no more than 20 pounds per square foot. A wall with loading resistance of more than 20 pounds per square foot requires a professional engineer or architect's certificate.

"Building" means any structure built for support, shelter, or enclosure for any occupancy or storage.

"Development" means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

"Elevated building" means a non-basement building (a) built, in the case of a building in an area of special flood hazard (Zones A1-A30, AE, A, A99, AO, AH, B, C, or X *Commentary: these zones are defined on maps on file in Durham City-County Inspections Department*) to have the top of the elevated floor, above the ground by means of pilings, columns (posts or piers), shear walls parallel to the flow of water and, (b) adequately anchored so as not to impair the structural integrity of the building during a flood up to the magnitude of the base flood. In the case of Zones A1-A30, AE, A, A99, AO, AH, B, C., and X, "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.

"Exception" is a grant of relief to a persons from the requirements of this ordinance which permits construction in a manner otherwise prohibited by this ordinance where specific enforcement would result in unnecessary hardship. A person, as used in this context, may be an individual, partnership, association, joint venture, or corporation.

"Existing manufactured home park or manufactured home subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before the original adoption of flood damage protection ordinances which occurred in the City of Durham on October 18, 1971 and in Durham County on August 21, 1972.

"Expansion to an existing manufactured home park or subdivision" means the preparation of the additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete slabs).

"Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) the overflow of inland or tidal waters; and,
- (2) the unusual and rapid accumulation of runoff of surface waters from any source.

"Flood Hazard Boundary Map (FHBM)" means an official map of a community, issued by the Federal Emergency Management Agency.

"Flood Insurance Rate Map (FIRM)" means an official map on which the Federal Emergency Management Agency has delineated both the areas of special flood hazard and the risk premium zones.

"Flood Insurance Study" is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the Flood Boundary Floodway Map and the water surface elevation of the base flood.

"Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the

water surface elevation more than one foot.

"Floodway Fringe" means the area within the special flood hazard area that has been identified on the Flood Boundary and Floodway Map, which area is adjacent to but not within the Floodway, but is within the 100 year floodplain and is inundated by the base flood.

"Floor" means the finished floor or the top surface of an enclosed area in a building (including basement), i.e., top of slab in concrete slab construction or top of wood flooring in wood frame construction.

"Functionally dependent facility" means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include long-term storage, manufacture, sales, or service facilities.

"Highest Adjacent Grade" means the highest natural elevation of the ground surface, prior to construction next to the proposed walls of the structure.

"Historic Structure" means any structure that is: (a) listed individually in the National Register of Historic Places (a listing maintained by the US Department of Interior) or preliminarily determined by the Secretary of Interior as meeting the requirements for individual listing on the National Register; (b) certified or preliminarily determined by the Secretary of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; (c) individually listed on a State inventory of historic places; (d) individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified (1) by an approved state program as determined by the Secretary of Interior, or (2) directly by the Secretary of Interior in states without approved programs.

"Levee" means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

"Levee System" means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

"Local Administrator" means the City-County Director of Inspections or the Director's designee.

"Lowest Floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building's lowest floor provided that such an enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of this ordinance.

"Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

"Manufactured home park or subdivision" means a residential development under single ownership with sites for placement of manufactured homes [manufactured home park]; or a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale [manufactured home subdivision]. Also included in this definition are the various support facilities for the residents of the development.

"Mean Sea Level" means the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this ordinance, the term is synonymous with National Geodetic Vertical Datum (NGVD).

"National Geodetic Vertical Datum (NGVD)" as corrected in 1929 is a vertical control used

as a reference for establishing varying elevations within the floodplain.

"New construction" means structures for which the "start of construction" commenced on or after the adoption of flood damage protection ordinances which occurred in the City of Durham on October 18, 1971 and in Durham County on August 21, 1972 and includes any subsequent improvements to such structures.

"New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either the final site grading or the pouring of concrete slabs) is completed on or after the original adoption of flood damage protection ordinances which occurred in the City of Durham on October 18, 1971 and in Durham County on August 21, 1972.

"Nonconforming building or use" mean any legally existing building or use which fails to comply with the provisions of this ordinance.

"Recreational vehicle" means a vehicle which is: (a) built on a single chassis; (b) 400 square feet or less when measured at the largest horizontal projection; (c) designed to be self-propelled or permanently towable by a vehicle; and, (d) designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.

"Reference feature" is the receding edge of a bluff or eroding frontal dune or, if such a feature is not present, the normal highwater line or the seaward line of permanent vegetation if highwater line cannot be identified.

"Remedy a violation" means to bring the structure or other development into compliance with State or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing Federal financial exposure with regard to the structure or other development.

"Start of construction" includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

"Structure" means a walled and roofed building, a manufactured home, including a gas or liquid storage tank, or other man-made facilities or infrastructures that are principally above ground.

"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. See definition of "substantial improvement."

"Substantial Improvement" means any repair, reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage". regardless of the actual repair

work performed. The term does not, however, include either: (1) any project or improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or, (2) any alteration of a historic structure, provided that the alteration will not preclude the structure's continued designation as an historic structure.

"Substantially improved existing manufactured home park or subdivision" means where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction, or improvement commenced.

"Violation" means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in Articles 4 and 5 is presumed to be in violation until such time as that documentation is provided.

ARTICLE GENERAL PROVISIONS

3.

SECTION LANDS TO WHICH THIS ORDINANCE APPLIES

6-304.

This ordinance shall apply to all areas of special flood hazard within Durham City and County.

SECTION BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD

6-305.

The areas of special flood hazard identified by the Federal Emergency Management Agency in its Flood Insurance Study, dated 1995, with accompanying maps and other supporting data, and any revision thereto are adopted by reference and declared to be a part of this ordinance.

When base flood elevation data or floodway data have not been provided in accordance with Article 3, Section 6-305, the local administrator may require HEC 2 or other engineering studies, or may obtain, review, and reasonably utilize any base flood elevation data and floodway data available from a Federal, State or other source.

SECTION PERMITTING SYSTEM

6-306.

All development activities shall conform with the permitting provisions of this ordinance, the zoning ordinance, and all other ordinances prior to their commencement.

SECTION COMPLIANCE

6-307.

No structure shall hereafter be located, extended, converted, or structurally altered and no land shall be disturbed without full compliance with the terms of this ordinance and other applicable regulations.

SECTION ABROGATION AND GREATER RESTRICTIONS.

6-308.

This ordinance is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this ordinance and another conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

SECTION INTERPRETATION

6-309.

In the interpretation and application of this ordinance all provisions shall be: (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and, (3) deemed neither to limit nor repeal any other powers granted under state statutes.

SECTION WARNING AND DISCLAIMER OF LIABILITY
6-310.

The degree of flood protection required by this ordinance is considered reasonable for regulatory purposes and is based on scientific and engineering consideration. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This ordinance does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This ordinance shall not create liability on the part of Durham City or County or by any officer or employee thereof for any flood damages that result from reliance on this ordinance or any administrative decision lawfully made hereunder.

SECTION PENALTIES FOR VIOLATION
6-311.

Violation of the provisions of this ordinance or failure to comply with any of its requirements shall constitute a misdemeanor, with penalties of fines or imprisonment, or both. Each day such violation continues shall be considered a separate offense. Violations for failure to remove an improvement shall be calculated under NCGS 143-215.58 (b). Nothing herein shall prevent Durham City or County from taking such other lawful action, including civil and equitable enforcement as is necessary to prevent or remedy any violation. In particular, enforcement may be as authorized by common law or by any or all of the statutory remedies described in NCGS Chapter 160A, Sections 175, 365, and 421 through 425. NCGS Chapter 153A, Sections 123 and 324, and 361 through 364 and NCGS 143-215.58. Violations that violate both this chapter and the Zoning Ordinance are also subject to the enforcement provisions of the Zoning Ordinance.

ARTICLE ADMINISTRATION
4.

SECTION DESIGNATION OF LOCAL ADMINISTRATOR
6-312.

The City-County Director of Inspections or the Director's designees are hereby appointed to administer and implement the provisions of this ordinance.

SECTION PERMIT APPLICATIONS FOR DEVELOPMENT ACTIVITIES (INCLUDING BUT NOT LIMITED TO: BUILDING PERMITS, SITE PLANS, AND SUBDIVISION PLATS)
6-313

Applications for development activities, including but not limited to land disturbing permits, building permits, site plans, and subdivision plats, shall be submitted in conformance with normal submittal procedures. Applications for property located within an area of special flood hazard as mapped by the Federal Emergency Management Agency, or identified pursuant to Article 5 Section 6-318 shall also submit:

- (1) A plot plan that shows the base flood elevation contour or 100 year floodplain or a statement that the entire lot or property is within the area of special flood hazard. The plan must be prepared by or under the direct supervision of a registered land surveyor or professional engineer registered in North Carolina. The plan shall also show existing and proposed contours based on an actual field survey.
- (2) The plan required by Article 4, Section 6-313 must show the floodway, if any, as identified by the Federal Emergency Management Agency, Article 3 Section 6-305 or Article 5, Section 6-319.
- (3) Where base flood elevation data are provided as set forth in Article 3 Section 6-305, the application shall show:
 - (a) the elevation (in relation to mean sea level) of the lowest floor (including basement) of any new and substantially improved structures, and
 - (b) in the case of building permits, if the structure has been floodproofed in accordance

with Article 4, Section 6-315 (9), the elevation (in relation to mean sea level) to which the structure was floodproofed.

- (4) Where the base flood elevation data are not provided, the applications must show construction of the lowest floor at least 2 feet above the highest adjacent grade.
- (5) Where any watercourse will be altered or relocated as a result of a proposed development, applications shall include: a description of the extent of watercourse alteration or relocation; an engineering report on the effects of the proposed project on the flood-carrying capacity of the watercourse and the effects to properties located both upstream and downstream; and a map showing the location of the proposed watercourse alteration or relocation.
- (6) When through an exception approved by the DRB, the applicant shall provide a certificate from a N.C. registered professional engineer or architect that the nonresidential floodproofed structure meets the floodproofing criteria in Article 4, Section 6-315 (9).
- (7) A flood elevation certification is required after the lowest floor is completed. Within twenty-one (21) calendar days of establishment of the lowest floor elevation, it shall be the duty of the permit holder to submit to the local administrator a completed elevation certificate, using FEMA's National Flood Insurance Program Elevation Certificate showing that the lowest floor, or floodproofed elevation, whichever is applicable, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer registered in North Carolina and certified by same. Any work done within the twenty-one (21) day calendar period and prior to submission of the certification shall be at the permit holder's risk. The local administrator shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby shall be cause to issue a stop-work order for the project.
- (8) Augmentation of Standards for Subdivision Proposals: All subdivision proposals in flood prone areas shall be consistent with the need to minimize flood damage; in conjunction with the other requirements of this Section and Article 5 Section 6-316, all subdivision proposals in flood prone areas, shall have public utilities and facilities such as water and sewer systems located and constructed to minimize flood damage; all subdivision proposals in flood prone areas shall have adequate drainage provided [in accordance with Durham and NCDOT standards] to reduce exposure to flood hazards; and, base flood elevation data [if available] including floodway, flood fringe, and 100 year flood elevation shall be shown on all subdivision proposals in flood prone areas.

SECTION ADMINISTRATIVE PROCEDURES **6-314.**

- (1) Inspections of Work in Progress: As the work pursuant to a permit progresses, the local administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the administrator has a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction at any reasonable hour for the purposes of inspection or other enforcement action.
- (2) Stop Work Orders: Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this ordinance, the administrator may order the work to be immediately stopped. The stop work order shall be in writing and directed to the person doing the work. The stop work order shall state the specific work to be stopped, the specific reasons for the stoppage, and the conditions under which the work may be resumed. Violation of a stop work order constitutes a misdemeanor.

- (3) Revocation of Permits: The local administrator may revoke and require the return of a permit by notifying the permit holder in writing stating the reason for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, or specifications; for refusal or failure to comply with the requirements of State or local laws; or for false statements or misrepresentations made in securing the permit. Any permit mistakenly issued in violation of an applicable State or local law may also be revoked.
- (4) Periodic Inspections: The local administrator and each member of the inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.
- (5) Violations to be Corrected: When the local administrator notifies the owner or occupant of the building of a violation, the owner or occupant shall immediately remedy each of the violations.
- (6) Actions in Event of Failure to Take Corrective Action: If the owner of a building or property shall fail to take prompt corrective action, the administrator shall give a written notice, by personal service or, by certified or registered mail to the last known address:
 - (a) that the building or property is in violation of the Flood Damage Protection Ordinance;
 - (b) that a hearing will be held before the local administrator at a designated place and time, not later than 10 days after the date of the notice, at which time the owner shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and,
 - (c) that following the hearing, the local administrator may issue such order to alter, vacate, or demolish the building; or to remove fill as appears appropriate.
- (7) Order to Take Corrective Action: If, upon a hearing held pursuant to the notice prescribed above, the administrator shall find that the building or development is in violation of the Flood Damage Protection Ordinance, the administrator shall make an order in writing to the owner, requiring the owner to remedy the violation within such period, not less than 60 days, the administrator may prescribe; provided that where the administrator finds that there is imminent danger to life or other property, corrective action may be taken in such lesser period as may be feasible.
- (8) Appeal: Any owner who has received an order to take corrective action may appeal from the order to the Development Review Board (DRB) as established by the Durham Zoning Ordinance and the Durham Subdivision Ordinance by giving notice of appeal in writing to the administrator within 10 days following issuance of the final order. In the absence of an appeal, the order of the administrator shall be final. The DRB shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.
- (9) Failure to Comply with Order: If the owner of a building or property fails to comply with an order to take corrective action from which no appeal has been taken, or fails to comply with an order of the DRB following an appeal, the owner shall be guilty of a misdemeanor and shall be punished at the discretion of the Court. In addition, the owner shall be subject to civil enforcement as described in Article 3, Section 6-311.

SECTION 6-315. PROCEDURES FOR DETERMINING EXCEPTIONS TO THE REQUIREMENTS

- (1) The Durham Development Review Board (DRB) as established by the Durham Zoning Ordinance and the Durham Subdivision Ordinance shall hear and decide requests for exceptions to these requirements. Any exceptions made shall require compliance with the conditions of Section D (8), below.
- (2) Any person aggrieved by the decision of the DRB or any taxpayer may appeal such decision to the Court, as provided in Chapter 7A of the North Carolina General Statutes.

- (3) Exceptions to the requirements may be allowed for the repair or rehabilitation of historic structures in areas of special flood hazards upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the modification is the minimum necessary to preserve the historic character and design of the structure.
- (4) In deciding upon such applications, the DRB shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this ordinance, and:
 - (a) the danger that materials may be swept onto other lands to the injury of others;
 - (b) the danger to life and property due to flooding or erosion damage;
 - (c) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (d) the importance of the services provided by the proposed facility to the community;
 - (e) the necessity to the facility of a waterfront location, where applicable;
 - (f) the availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (g) the compatibility of the proposed use with existing and anticipated development;
 - (h) the relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - (i) the safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (j) the expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and,
 - (k) the costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
- (5) The findings listed above shall be submitted to the DRB, in writing and included in the permanent record of the decision.
- (6) Upon consideration of the factors listed above and the purposes of this ordinance, the DRB may attach such conditions as it deems necessary to further the purposes of this ordinance.
- (7) Exceptions shall not be allowed within any designated floodway if any increase in flood levels during the base flood discharge would result.
- (8) Required Conditions:
 - (a) Exceptions may not be made when the modification will make the structure in violation of other Federal, State, or local laws, regulations, or ordinances.
 - (b) Exceptions shall only be made upon a determination that the modification is the minimum necessary, considering the flood hazard, to afford relief.
 - (c) Exceptions shall only be issued upon (i) a showing of good and sufficient cause; (ii) a determination that failure to grant the exceptions would result in unusual hardship to the owner of the property that was not caused, in whole or in major part, by the property owner and, (iii) a determination that the exception will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict

with existing local laws or ordinances.

- (d) Any applicant to whom an exception is allowed shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. Such notification shall be maintained with a record of all such exceptions.
- (e) The local administrator shall maintain the records of all appeal actions and report any actions to the Federal Emergency Management Agency upon request.
- (9) If any exception is made by the DRB to allow structures to be floodproofed in lieu of elevation, the structure shall be subject to the following standards:
 - (a) All areas of the structure below the required elevation shall be watertight with walls substantially impermeable to the passage of water.
 - (b) The structural components shall have the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy.
 - (c) A North Carolina registered professional engineer or architect shall certify that these standards are satisfied.

ARTICLE PROVISIONS FOR FLOOD HAZARD REDUCTION

5.

SECTION GENERAL STANDARDS

6-316.

Development and land disturbing activity in floodway and floodway fringe are regulated by the Durham Zoning Ordinance, [Section 11](#), Natural Resource Protection Standards in addition to the Durham, NC Flood Damage Protection Ordinance. Where development is allowed by the Durham Zoning Ordinance, the following provisions are required in all areas of special flood hazard:

- (1) All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure;
- (2) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- (3) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damages;
- (4) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.
- (5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- (6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
- (7) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding; and,
- (8) Any alteration, repair, reconstruction, or improvements to a structure which is in compliance with the provisions of this ordinance, shall meet the requirements of "new construction" as contained in this ordinance.
- (9) Non-Conforming Buildings or Uses. Non-conforming buildings or uses may not be enlarged, replaced, or rebuilt.

- (10) Fill material shall be used for all new construction and substantial improvements to create an elevation that is two feet above base flood elevation. The fill material shall be required to extend for a distance of 40 feet from the exterior walls of a building. Where the distance to the property line is less than 40 feet, the fill shall extend to the property line. The required fill material distance shall include a sloped edge with a maximum 3:1 slope [for example, for a fill 3 feet deep: 31 feet of flat fill + 9 feet of sloped fill] or a retaining wall in lieu of the slope [for example, a side yard of flat fill and a retaining wall]. Residential accessory structures which are defined as nonhabitable structures by the North Carolina Building Code are exempt from requirements to extend the fill material away from the base but are required to be placed on fill which is two feet above base flood elevation. Exceptions from any of these requirements resulting from special storm water considerations shall be forwarded to the DRB as described in Article 4, Section 6-315, only with a recommendation from the Engineer's office.

SECTION 6-317. SPECIFIC STANDARDS FOR DEVELOPMENT IN THE FLOODWAY FRINGE

In all areas of special flood hazard where base flood elevation data have been provided, as set forth in Article 3, Section 6-305, and delineated as floodway fringe, the following standards for development must be met in addition to the requirements associated with the zoning designation of the property:

- (1) Residential Construction. New construction or substantial improvement of any residential structure [See (3) for information on manufactured homes] shall have the lowest floor, including basement, elevated no lower than two feet above the base flood elevation.
- (2) Nonresidential Construction. New construction or substantial improvement of any commercial, industrial, or nonresidential structure shall have the lowest floor, including basement, elevated no lower than two feet above the level of the base flood elevation.
- (3) Manufactured Homes
 - (a) Manufactured homes that are placed or substantially improved on sites (i) outside a manufactured home park or subdivision; (ii) in a new manufactured home park or subdivision; (iii) in an expansion to an existing manufactured home park or subdivision; or, (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, must be on a permanent foundation such that the lowest floor of the manufactured home is no lower than two feet above the base flood elevation.
 - (b) Manufactured homes that are to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the provisions of Article 5, Section 6-317 (3a) of this ordinance must be elevated so that the lowest floor of the manufactured home is no lower than two feet above the base flood elevation.
 - (c) Manufactured homes shall be anchored to prevent flotation, collapse, or lateral movement. For the purpose of this requirement, manufactured homes must be anchored to resist flotation, collapse, or lateral movement in accordance with the ***Regulations for Mobile Homes and Modular Housing*** adopted by the Commissioner of Insurance pursuant to NCGS 143.143.15.
 - (d) An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within areas of special flood hazard. This plan shall be filed with the local administrator and the local Emergency Management coordinator at the time of site plan approval, or subdivision plat approval. If site plan or subdivision approval is not required, the plan shall be filed for approval prior to issuance of a building permit.

(4) Recreational Vehicles.

Recreational vehicles shall either:

- (a) be on site for fewer than 180 consecutive days and be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on wheels or jacking system, is attached to the site only by quick-disconnect type utilities and security devices, and has no permanently attached additions; or
- (b) meet the requirements of Article 4, Section 6-313 and Article 5, Sections 6-316 and 6-317 (3).

(5) Temporary Structures. Prior to the issuance of a permit for a temporary structure, the following requirements must be met:

- (a) All applicants must submit to the local administrator prior to the issuance of a permit, a plan for the removal of such structure(s) in the event of a hurricane or flash flood warning notification. The plan must include the following information:
 - (i) a specified time period for which the temporary use will be permitted;
 - (ii) the name, address and phone number of the individual responsible for the removal of the temporary structure;
 - (iii) the time frame prior to the event at which a structure will be removed (i.e. minimum of 72 hours before landfall of a hurricane or immediately upon flood warning notification);
 - (iv) a copy of the contract or other suitable instrument with a trucking company to insure the availability of removal equipment when needed; and
 - (v) designation, accompanied by documentation of a location outside the area of special flood hazard to which the temporary structure will be moved.
- (b) The above information shall be submitted in writing to the local administrator for review and written approval.

(6) Accessory Structures. When accessory structures, as defined in this section are to be placed in areas of special flood hazard the following criteria shall be met:

- (a) Accessory structures shall not be accessory dwellings and shall not be used for human habitation (including working, sleeping, living, cooking or rest room areas);
- (b) Accessory structures shall be designed to have low flood damage potential;
- (c) Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters;
- (d) Accessory structures shall be firmly anchored in accordance with Article 5, Section 6-316 (1);
- (e) Service facilities such as electrical and heating equipment shall be installed in accordance with Article 5 Section 6-316 (4).

(7) All construction shall comply with the applicable flood hazards reduction provisions of Article 5. Nonconformities are subject to the requirements of Article 5, Section 6-316 (9).

SECTION 6-318. SPECIFIC STANDARDS FOR DEVELOPMENT IN FLOODWAYS

Located within areas of special flood hazard established in Article 3, Section 6-305, are areas designated as floodways. The floodway is an extremely hazardous area due to the velocity of flood waters which carry debris and potential projectiles and which have erosion potential.

The following provisions shall apply within such areas:

- (1) Restricted uses in floodways: Only those uses permitted by the zoning ordinance and listed below may be placed on those portions of a property located within the floodway and the uses shall be subject to the following additional requirements:
 - (a). The following uses, when permitted by the zoning ordinance, are allowed to locate within floodways without certification by a professional engineer regarding resulting changes in flood levels during a base flood:
 - i. General farming, pasture, outdoor plant nurseries, horticulture, forestry, wildlife sanctuary, game farm, and other similar agricultural uses or wildlife uses.
 - ii. Loading areas, parking areas, aircraft landing areas, and other similar industrial-commercial uses.
 - iii. Lawns, gardens, parking, play areas, and other similar uses.
 - iv. Golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, parks, and other similar private and public recreational uses.
 - (b). The following uses, when permitted by the zoning ordinance, may be allowed to locate within floodways if certification by a professional engineer registered in North Carolina is provided to the approving authority that no increase in flood levels during a base flood will result:
 - i. Railroads, streets, bridges, culverts, creeks, and storm drainage facilities, sewerage or water treatment plant outlets, water supply intake structures, and other public, community or utility uses.
 - ii. Marinas, boat rentals, docks, or piers.
 - iii. Pilings, or other columns used for support.
 - iv. Dams, provided that any person proposing the construction of a dam shall provide documentation prepared by a professional engineer registered in North Carolina that such a dam will not cause the inundation of any land not owned by the person constructing the dam and any existing structures on lands owned by the person constructing the dam, and proof that all required Federal and State permits for the dam have been obtained.
- (2) No encroachments into the floodway shall be permitted unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice and prepared by a professional engineer registered in North Carolina, that the proposed encroachment would not result in any increase in the flood levels during the occurrence of the base flood. Such certification and technical data shall be presented to the local administrator.
- (3) If Article 5, Sections 6-318 (1 & 2) are satisfied, construction shall comply with any applicable flood hazards reduction provisions of Article 5. Nonconformities are subject to the requirements of Article 5, Section 6-316 (9).

SECTION 6-319. STANDARDS FOR STREAMS WITHOUT ESTABLISHED BASE FLOOD ELEVATIONS AND/OR FLOODWAYS

Located within the areas of special flood hazard established in Article 3, Section 6-305, are small streams where no base flood data has been provided or where no floodways have been identified. The following provisions apply within such areas.

- (1) No encroachments, including fill, new construction, substantial improvements or new development shall be permitted within the setback distance established by the stream buffer overlay district or the watershed protection overlay district of the Durham Zoning

Ordinance, or twenty feet each side from top of bank, which ever is greater.

- (2) If Article 5, Section 6-319 (1) is satisfied and base flood elevation data is available from other sources, all new construction and substantial improvements within such areas shall comply with all applicable flood hazard reduction provisions of Article 5 and shall be elevated with elevations established in accordance with Article 3, Section 6-305. When base flood elevation data are not available from a Federal, State, or other source, the lowest floor, including basement, shall be elevated at least two feet above the highest adjacent grade.

ARTICLE LEGAL STATUS PROVISIONS

6.

**SECTION EFFECT ON RIGHTS AND LIABILITIES UNDER THE EXISTING FLOOD
6-320 DAMAGE PROTECTION ORDINANCE**

This Ordinance in part comes forward by re-enactment of some of the provisions of the flood damage protection ordinance enacted in the City of Durham on October 18, 1971 and in Durham County on August 21, 1972, as amended and subsequently re-enacted by Durham City and County on December 31, 1993 (Durham City-County Zoning Ordinance Section 11), and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of this ordinance shall not affect any action, suit or proceeding instituted or pending. All provisions of the flood damage protection ordinance section of the Durham City and County zoning ordinance enacted on December 31, 1993, as amended, which are not reenacted herein are repealed.

**SECTION EFFECT UPON OUTSTANDING BUILDING PERMITS
6-321.**

Nothing herein contained shall require any change in the plans, construction, size or designated use of any building, structure or part thereof for which a building permit has been granted by the Inspections Director or authorized agents of the Director before the time of passage of this ordinance; provided, however, that when construction is not begun under such outstanding permit within a period of six months subsequent to passage of this ordinance, construction or use shall be in conformity with the provisions of this ordinance.

**SECTION EFFECTIVE DATE
6-322.**

This ordinance shall become effective upon adoption.

**SECTION ADOPTION CERTIFICATION
6-323.**

I hereby certify that this is a true and correct copy of the flood damage protection ordinance as adopted by the Durham City Council on the _____ day of _____, 199____.

WITNESS my hand and official seal of _____, this the _____ day of _____, 199____.

To reach Durham City/County Planning call 919-560-4137 or fax us at 919-560-4641